CHAPTER 3 - INSPECTIONS

3.5 SOLID WASTE INSPECTIONS

[Editor's Note: at the date of publication, all links in this section to the Solid Waste Management Program's Inspection and Enforcement Manual (I&E Manual) direct only department staff users to material on the department's Intranet site. Users outside the department's computer network who click those links will reach an error message.]

3.5.1 Overview

Purpose
Missouri's Solid Waste Management Law and regulations provide the basis for regulating solid waste management in the state. The purpose of conducting inspections is to evaluate the degree to which a facility or site (permitted or unpermitted) complies with the laws, regulations and applicable permit conditions. Routine inspections can also provide compliance assistance and information as well as appropriately promoting prompt, consistent and effective enforcement action against facilities violating the law.

Applicability
Regional office personnel regularly inspect all permitted solid waste processing facilities and disposal areas, and investigate and document unpermitted or illegal operations. In addition, they investigate scrap tire sites, tire retailers that maintain collection centers, scrap tire haulers, scrap tire processors and scrap tire end users.

Introduction
The frequency for conducting each of the various inspections is established cooperatively by the department's Solid Waste Management Program (SWMP) and the regional offices and is conveyed annually in the work plans. The SWMP, regional director, or division director may request additional inspections at certain facilities to monitor compliance or to provide litigation support to the AGO.

The level of effort needed to determine a facility or site's compliance with the applicable requirements will understandably vary from facility to facility and site to site. The purpose for the inspection will also affect the amount of time and effort needed to conduct it. A typical inspection includes a complete evaluation of the facility or site, and includes on-site visual observations of the facility or regulated activity, a review of appropriate facility records and observations of off-site effects when necessary. Face-to-face communications are required with the persons responsible for the facility/site if they are available. The results of the inspection must be conveyed verbally during the exit interview.[1] The inspection checklist (see section 3.5.8 Forms and Checklists) includes pictures of the facility, a narrative describing the inspection and detailing

[1]Exit Interview: A face-to-face discussion with the responsible party at the conclusion of every inspection/investigation must be held whenever possible. The discussion must include all unsatisfactory features observed, and comments regarding any needed correction. If the conditions observed warrant an NOV, the owner/operator should be informed that it may be forthcoming.

Revision published: 7/07/06
Primary Authors: Rick Pretz, Beth Marsala

observations, deficiencies and comments regarding improvements. The checklist and an accompanying transmittal letter must be prepared and transmitted within 30 days of the inspection to the owner and operator (if different from the owner).

Surveillance Inspection

A surveillance inspection is a brief site visit to determine the condition of a facility or site made when a complete on-site inspection is not possible or is not necessary. A drive-by surveillance or a brief site visit may be used when only one or two easily-observed features need to be checked (e.g., to learn whether a landfill has applied daily cover, or to see if a dump has been cleaned up.) This is a time-efficient method to determine whether an illegal dumpsite has been cleaned up. Observations may be made from an off-site vantage point if the inspector does not have permission to enter a property, or if illegal activities are suspected. Such observations should be made only from a public right-of-way, or from adjacent property whose owner has given permission for the inspector to enter. Regional office staff does not normally conduct long-term surveillance. Any proposed long-term surveillance must be coordinated with the SWMP enforcement section.

The results of the surveillance visit must be documented as appropriate. If violations are found, a Letter of Warning (LOW), an Illegal Dump Investigation Report (IDIR), and/or a Notice of Violation (NOV) will be issued to the responsible party as outlined in Section V.A.1.a of the SWMP's Inspection and Enforcement (I&E) Manual. If no violations are noted, a memo to the file documenting the lack of violations is sufficient. If surveillance shows that a dump has been cleaned up, a letter to the responsible party acknowledging compliance will be sent.

Surveillance visits may require follow-up with other actions. One or more follow-up site visits or phone calls may be necessary to monitor the progress of a large cleanup or to verify a facility's compliance with a schedule of compliance established by an enforcement action or agreement.

Preparation for Inspections

Prior to the inspection, the inspector will conduct a thorough review of the file, including the permit and any subsequent modifications, the plans, inspection reports, etc. If the inspector is unfamiliar with the facility, notes will be taken during the review, as well as making copies of pertinent documents and facility diagrams or site maps to take along on the inspection. This would be especially important if the facility is, or has been, under enforcement action, or if compliance deadlines have been established. Copies of pertinent documents and facility diagrams/site maps may also aid satellite office staff in keeping familiar with the facilities and illegal dumps they inspect since the facility/illegal dumping files are kept at the regional offices. Prior to inspecting facilities under enforcement, the SWMP case manager is to be notified of the plans for the inspection. In addition, following the inspection the inspector will notify the case manager of the results of the inspection, and unless otherwise directed will forward a draft inspection to the case manager for review and comment prior to sending out to the regulated facility or responsible party.

Other items the inspector should take along during the inspection include business cards, pertinent technical bulletins and copies of the Solid Waste Management Law and regulations for compliance assistance efforts, as appropriate.

The inspector will also determine and organize the equipment that will be needed during the inspection. At many facilities/sites, safety equipment such as hard hats, gloves, steel-toed boots, safety glasses and hearing protection may be required. (Sunblock and insect repellent may also be desired for inspections performed from spring through fall.) If samples will be collected, the appropriate sampling equipment, sample containers, labels, chain of custody sheets, etc. will need to be acquired. The inspector will review the instructions for proper use, calibration, maintenance, and operation of any equipment needed for the inspection or sampling activities. The inspector will document the observations with photographs. Photographs will be included with the copies of the inspection report sent to the facility and the SWMP, particularly if the facility/illegal dump has been referred to the program or the Attorney General's Office prior to the time of the inspection.

The department's authority to conduct inspections of solid waste facilities is provided by sections 260.225.1(9) and 260.210.4, Revised Statutes of Missouri (RSMo). If access to the property is denied or if the inspector feels threatened by circumstances at the facility or dumpsite, they should leave the premises immediately and discuss the situation with a supervisor. If access is denied, a search warrant can be obtained to continue the inspection at a later date. (Procedures for obtaining Search Warrants can be found in "Appendix B.12" of the SWMP I&E manual). If the situation is perceived to be threatening, discuss with your supervisor prior to conducting the site visit.

Conducting the Inspection
Inspections are conducted to determine whether the facility is being constructed, maintained, and operated according to the Missouri Solid Waste Management Law and regulations, the approved engineering plans and specifications, and the terms and conditions of the permit. A facility representative should accompany the inspector as much as possible so that problems and violations may be pointed out and discussed as they are observed. Be certain to conduct an exit interview with the facility representative prior to leaving the site.

3.5.2 Landfill Inspections

A landfill inspection includes sanitary, demolition and utility landfills. They can be either active (currently accepting waste), inactive (not accepting waste but not officially closed) or closed (not accepting waste and have been officially closed).

An active landfill inspection should include at least the following activities:

- reviewing records[2] as appropriate
- verifying certification of solid waste technician(s)

[2] 10 CSR 80-3.010(20) contains the general record keeping requirements for sanitary landfills. Records required at demolition landfills are listed in 10 CSR 80-4.010(20). More detailed requirements for some types of records, such as tonnage fees, are found in other sections of the regulations. Tonnage fee records should be checked carefully to verify that they comply with 10 CSR 80-2.080. Any discrepancies should be noted and described in detail in on the checklist.

- observing the working face to check for application of daily cover, compaction of wastes and exclusion of banned items
- checking for proper disposal of bulky solids, dead animals and special wastes
- checking adequacy of daily, intermediate, and final cover
- examining leachate collection and disposal systems
- examining gas collection and control systems
- evaluating dust control measures
- evaluating vector control measures
- evaluating litter control measures
- evaluating compliance with corrective action milestones
- checking the perimeter of filled areas to check for signs and effects of leachate and landfill gas migration
- checking land disturbance areas, and surface water diversion and drainage systems for compliance with water pollution control regulations
- checking adequacy of vegetation on inactive phases
- verifying that all required vertical control, horizontal control, boundary markers, and construction stakes are in place and properly marked
- checking waste handling equipment for fire extinguishers and communication equipment
- checking to see that the borrow areas are properly reclaimed, when appropriate
- checking to see if groundwater and gas monitoring activities are being performed as required
- checking to see that excluded/salvaged items are stored in an aesthetically acceptable manner
- checking slopes and determining if fill areas comply with the horizontal and vertical limits specified in the permit
- documenting the existence and condition of groundwater monitoring wells and gas monitoring wells

Construction and Operation

The department is responsible for ensuring that the landfill operations are being performed in compliance with the Solid Waste Management Law and regulations and the conditions of the facility's construction and operating permits. The SWMP engineers have the responsibility for determining if the initial construction of each phase (i.e., liner construction, installation of the leachate collection system, etc.) complies with the engineering plans and specifications and the construction permit. The regional office inspectors are asked to evaluate the construction of subsequent landfill components, such as maintaining proper grades on slopes, constructing storm water diversions, etc. The inspector should also verify that the landfill is operated in accordance with applicable requirements. This includes but is not limited to determining if the operator is applying adequate daily, intermediate and final cover, is performing all necessary gas and groundwater monitoring activities, is properly operating all leachate and gas collection systems, is adequately controlling litter and vectors, etc. To the extent possible, the inspector should also determine if the facility is in compliance with the horizontal and vertical limits specified in its permit. It is very important that any unapproved construction or other change to the facility is documented and the enforcement section of the SWMP is notified as

soon as possible.

Certified Waste Technician Requirements
The Missouri Solid Waste Management Law and regulations require that sanitary and demolition landfills employ a certified solid waste technician to perform or direct site operations. The SWMP provides the training needed for landfill operators to become certified and keep their certification current. The inspector should verify that the landfill meets these certification requirements.

Regional office staff who conduct inspections of landfills or provide technical and compliance assistance to landfills must also attend the training, become certified, and keep certification current. In addition, any SWMP staff that conduct compliance and enforcement work need to be certified. (Although it is not required, it is recommended that SWMP engineering staff obtain and maintain a current solid waste technician certification.)

Working Face (Open Face)
The open face should be checked to determine if adequate screening of waste is being performed to prevent the disposal of excluded waste. The operator at sanitary landfills should take extra precautions during the placement of the fluff layer (first lift of trash placed above the liner and leachate collection system) to prevent the disposal of bulky waste or demolition waste that could puncture or damage the liner during compaction. If practical, the regional office inspector may wish to plan a facility's quarterly inspection at a time when the placement of the fluff layer can be observed, to ensure bulky or demolition waste is not placed near the liner.

The regulations require that the size of the working face be confined to the smallest practicable area and that the waste be placed in lifts of no more than two (2) feet thick and compacted to the smallest practicable volume. Evaluation of the facility's compliance with these criteria requires a judgment call by the inspector on what constitutes the smallest practicable area or volume for a particular landfill operation. Generally speaking, the SWMP recommends that these features not be rated as unsatisfactory unless they are leading to or would lead to other problems at the site (for example, if the operator is making little effort to keep the working face small), that result in excessive litter or odor problems. Another example would be if the facility's compactor has been out of service for an extended period of time and the operator has not made an adequate attempt to quickly repair or replace this equipment. This could lead to future problems of excessive or differential settling of waste or excessive erosion of cover soil that is not adequately compacted.

Cover

- Daily Cover - The regulations require that sanitary landfills place a minimum of six (6) inches of compacted soil cover over the waste at the end of the working day. For facilities that operate 24 hours per day, the cover must be applied at least every 24 hours. The SWMP may have special requirements and conditions for facilities open 24 hours; therefore, the inspector should become acquainted with these conditions. Inspectors should also discuss these special requirements with the facility to determine how they are complying with the requirement(s), and then be sure to check their procedures as a part of the quarterly inspections.

Demolition landfills are required to apply 12 inches of compacted cover once per week. The inspector should check to see if the operator is applying the proper amount of daily cover at the required frequency. A minimal amount of waste that has been tracked or litter that has blown onto a filled and covered area would not be considered unsatisfactory. However, if the inspector observes an excessive amount of waste protruding up through the cover or finds litter tracked or blown throughout the facility, the item should be marked unsatisfactory. Persistent failure to apply daily cover or allowing blown litter to leave the facility's property boundary would generally warrant the issuance of a Notice of Violation. Further direction about issuing Notices of Violation is provided in the SWMP I&E manual.

Some landfills scrape off or remove the previous day's daily cover to be reused. This is allowable if litter is not tracked to other portions of the landfill during the scraping or the waste is not left uncovered.

- Intermediate Cover - The regulations require that sanitary landfills increase the thickness of soil cover to 12 inches over filled areas that are idle for more than 60 days. There are no comparable requirements for demolition landfills.

- Final Cover - Final cover requirements for landfills depend primarily upon when the facility ceased taking waste and whether or not it has a composite liner. The inspector should check the facility's plans and specifications, the facility's approved closure/post-closure plan and the applicable regulations to determine what final cover requirements apply to the landfill they are inspecting.

- Alternate Daily Cover (ADC) - Facilities that have a liner and leachate collection system may utilize alternative daily cover (ADC) upon receipt of prior approval by the department. Some types of ADC that have been approved by the department include tarps, shredded or chipped tires mixed with dirt, ground vegetative waste, etc. The inspector should check to see if the facility has been authorized to use ADC, and if so, that the facility is utilizing the ADC in accordance with the conditions and restrictions of the department's approval.

Elevation Surveys and Slopes
To ensure stability of landfill slopes, the regulations require that no active, intermediate or final slopes may exceed 33 percent. The regulations also state that no final slopes may exceed 25 percent without department approval.

Active landfills are required to have vertical and horizontal controls, markers, and construction stakes to ensure that the construction and operation of the landfill proceeds in accordance with the approved plans. In addition, active landfills are required every two years to submit a topographic map prepared by a land surveyor or aerial survey that shows the current horizontal and vertical boundaries of the solid waste in the landfill.

The inspector should check to see if the facility has installed the required vertical controls, horizontal controls and boundary markers and submitted the required topographic map. If the slopes of the working face or the interior or exterior slopes of the landfill appear to be excessive, the inspector

should check them with a clinometer, if possible. If the clinometer readings indicate that interior slopes or the working face slope exceed 3:1, the inspector should request that the facility make immediate corrections in order to improve stability of the slope. If clinometer readings indicate that exterior slopes are excessive, it may indicate the landfill has overfilled and exceeded its vertical elevations. The inspector must contact the SWMP engineering section to be sure they are not already aware of the overfill/exceedance. If they are not aware of the situation, the overfill is an illegal one, and the inspector will also notify the SWMP Enforcement Section. The inspector will advise the landfill operator that to obtain the services of a registered land surveyor to perform a survey of the area in question.

Vegetation
The regulations require that vegetation be established within 180 days of the application of intermediate cover to minimize erosion and surface water infiltration.

Erosion
Erosion of slopes, if uncontrolled, can compromise slope stability and can lead to exposure of buried waste. Eroded areas should be repaired by re-covering, re-grading, and re-seeding.

Landfill Gas Monitoring
The breakdown of solid wastes in a landfill results in the generation of methane and other decomposition gases. High concentrations of methane gas can pose a number of threats to public health and to the environment. The accumulation of methane in buildings or other confined spaces can pose a risk for explosion or asphyxiation. In addition, in the presence of an ignition source, accumulation of methane in the landfill can ignite and lead to trash fires that may damage monitoring and collection equipment, release toxic gases, and be very difficult to extinguish. Landfill gas can kill vegetation (especially trees) by displacing oxygen and asphyxiating the roots. Therefore, it is essential that the generation and migration of methane is closely monitored and controlled.

All active sanitary landfills and some closed landfills[3] are required to monitor the methane gas concentrations at their property line. They should conduct this sampling on a quarterly basis or at another interval as directed or approved by the SWMP. The inspector shall review the facility's gas monitoring results for the last six months during each inspection. The inspector will also check the perimeter of the facility for signs of gas migration such as detection of the characteristic landfill gas odor, bubbling, and dead or stressed vegetation (particularly trees), etc. If the inspector finds that the facility is not performing the methane monitoring at the required intervals, notify the program's engineering section to see if less or more frequent monitoring has been authorized or required.

The SWMP has developed a detailed guidance document that outlines actions to be taken in the event that methane gas is detected in buildings or soil at or

[3] The closed landfills that are required to monitor for landfill gas include: Bridgeton SLF, Centralia SLF, Centropolis SLF, Ellis Scott SLF, Farmers Stone Product SLF, Kahle #7 (Cedar Hollow), Lamar SLF, Maryville SLF, Missouri Pass SLF, Newton/McDonald SLF, Northside SLF, Pemiscot County SLF, Perry County SLF, Renfro SLF, Rumble I Recycling and Disposal Facility, Rumble II Recycling and Disposal Facility, Rye Creek SLF, and Southeast SLF.

around a landfill. This document, entitled *"Methane Gas Protocol",* is located in Appendix F.2 to the SWMP I&E manual). This document also provides guidelines for conducting a landfill gas assessment. The first time methane concentrations are detected (either by the program or by the inspector) in excess of the applicable limitations, an NOV will be issued to the facility. The SWMP recognizes, however, that proposals for addressing methane gas problems will take some time to design and implement. If the facility is attempting to address their gas problems in accordance with a schedule established or approved by the SWMP, a follow-up Notice of Violation will not be issued without the consultation and approval of the SWMP. If the facility is already under enforcement, the inspector will discuss the situation with the SWMP Enforcement Unit prior to sending an NOV to the facility. Regardless of whether a subsequent NOV is issued, the violations of the methane limits should be denoted in the appropriate location on the inspection checklist as an unsatisfactory feature.

Methane Gas Collection and Control Equipment
Landfills with concentrations of methane that exceed regulatory limits in on-site buildings or at the property line are required by the Solid Waste Management Program to take appropriate action to mitigate the violations. The actions must ensure adequate protection of public health and safety. Actions generally result in the installation of some type of gas collection and control equipment.

Given the dangers posed by methane, gas collection systems must be carefully designed, installed and operated. Following the installation and start-up of any active extraction system, the landfill design engineer should provide the landfill operator/manager with an operations manual that outlines the minimum, maximum, and safe operating ranges for the equipment. Included as well should be the requirements for proper inspection and maintenance of the system. The inspector will review the operations manual and check the facility's records to see that each component of the gas extraction and disposal system is checked on an acceptable schedule, is operated within the proper ranges, and that all associated safety equipment is present, available, and maintained in good operating condition. The inspector will check the perimeter of the landfill for signs of gas migration, which may indicate that the gas control system or portions of the system are not adequately controlling the migration of gas from the landfill. An inspector will also review the performance of any gas monitoring probes at the landfill as appropriate, especially if the facility is having a current migration issue or has a history of gas migration.

The SWMP engineering section approves the design of landfill gas systems installed at landfills. To further ensure the safety and protection of public health and the environment, the SWMP inspector should still evaluate the operation of these systems during each inspection by, at a minimum, looking at flare, blowers and other visible components of the system. Any problems or concerns identified during the inspection should be forwarded to the regional office Air Pollution Control Program Unit and SWMP Engineering and Enforcement Units for evaluation and follow-up as needed.

Leachate Collection and Disposal System
All active landfills must have an approved method of leachate collection and management. Several treatment or disposal options are available to the landfill, including discharge to a Publicly Owned Treatment Works (POTW), treatment and direct discharge into a receiving stream (requires NPDES

permit), recirculation back into the fill, and mechanical evaporation. However, a storm water retention basin or settling pond is not approved for use in treating or storing leachate. Leachate must not be allowed to enter the storm water pond. If leachate enters the storm water pond, the contents of the pond may be considered leachate and must be handled accordingly. Discharges from storm water ponds require an NPDES permit and must be coordinated with the regional office water pollution permitting staff. Also, land application of leachate onto Subtitle D final cover is not an approved method of leachate management and disposal.)

Leachate collection and removal system~~s~~ must be designed and operated such that less than one foot (12 inches) of leachate is maintained over the disposal area liner. The inspector shall check the leachate pumping system equipment and records to determine whether the leachate is being removed from the landfill and managed in accordance with the facility's approved operations manual.

CAUTION: Landfill gases may travel through or along a leachate collection system and accumulate in the system's manholes. Therefore, the inspector must exercise care when inspecting a leachate collection system manhole. To minimize the risk for explosion, only non-sparking instruments will be used to raise the manhole cover. Intrinsically safe instruments and equipment must be used for monitoring, sampling, or pumping the leachate from these locations. UNDER NO CIRCUMSTANCES SHALL AN INSPECTOR ENTER A CONFINED SPACE, SUCH AS A MANHOLE, FOR INSPECTION OR TO COLLECT SAMPLES. If entry into a confined space is required, the inspector shall discuss with the supervisor, the SWMP, and request the assistance of the Environmental Services Program.

Leachate Discharge and Receiving Stream Sampling
If leachate is observed discharging off the permitted property (crossing the property boundary) or into waters of the state, photographs shall be taken. A grab sample of the leachate will be collected and the receiving stream will be sampled. An NOV will be issued to document this violation and the Water Protection Program (WPP) will be copied on the inspection report and sample analyses.

If leachate outbreaks are noted during an inspection on exterior slopes, but leachate is not leaving the property or entering waters of the state, the inspector will mark the appropriate item unsatisfactory on the inspection checklist, but samples need not be collected. If the leachate outbreak is controlled, the inspector can use discretion to ensure repair of the outbreak. Some landfills recirculate their leachate and there may be outbreaks after heavy prolonged rainfall. The inspector should indicate on the checklist whether the outbreak is due to an operational problem that is being addressed or a problem that needs attention and remediation.

Groundwater Monitoring
Each active landfill has groundwater wells to monitor whether contaminants are entering groundwater. The existence and condition of the wells should be checked during each inspection to see that:

- the number of wells and their locations agree with current plan sheets,
- the caps are in place for both the casing and the well itself,
- the protective cover is locked,
- the wells are marked with identifying numbers,

- the concrete apron surrounding the casing has not pulled away from the protective cover, and
- freeze/thaw conditions have not caused heaving of the well or damage to the seal.

All monitoring wells greater than ten (10) feet in depth must be installed by a permitted–monitoring well installation driller and the well itself must be certified with the department in accordance with the department's well construction regulations (10 CSR 23-4).

If the wells are no longer being used, provide unreliable or suspect information, or have been damaged beyond repair, they must be properly closed according to 10 CSR 23-3. The closure must be registered by the Water Protection Program's (WPP) wellhead protection section. When new wells are installed or old wells replaced at landfills, the SWMP engineering section shall forward copies of approval letters for installation of additional wells, as-built drawings, etc., to the solid waste units at the regional office. If the inspector identifies a recently installed well during the inspection, they will examine documents at the facility to determine that these modifications were made with SWMP approval. The existence of any new or replacement wells will be documented on the checklist and an e-mail notification sent afterward to the SWMP engineering section. The inspector will notify the SWMP engineering section if it is determined that any wells are missing or have been damaged. Questions about groundwater monitoring may be directed to the SWMP engineering section. This section is responsible for evaluating groundwater monitoring data and any reports of groundwater investigations submitted by the landfills.

Surface Water Quality Protection
Active landfills in Missouri are required to have a National Pollutant Discharge Elimination System (NPDES) permit to regulate the discharge or surface water runoff from landfills into the waters of the state. The inspector will verify that the facility's NPDES permit is current and will be familiar with the location of the permitted outfalls. The inspector will check to see that all storm water basins or discharges from potential water contaminant sources, such as compost areas, etc., are listed among the outfalls in the permit. The inspector will report unpermitted discharges or outfalls to the regional office water pollution staff for appropriate follow-up.

The inspector will check to see if the facility is conducting the monitoring required by the NPDES permit and submitting the discharge monitoring reports to the appropriate regional office as required.

The inspector will determine if storm water is being diverted away from the working face and if adequate cover (daily, intermediate, or final) has been applied to prevent surface water contact with any exposed waste. NPDES permits for most landfills require that any surface water that comes in contact with waste be subject to treatment and permit limits.

Landfills are also required to protect surface water bodies from land disturbance activities occurring on-site. Landfills will have requirements imposed by a general land disturbance permit. The NPDES permits for some landfills may require the facility to develop and implement Storm Water Pollution Prevention Plans (SWPPPs). The SWPPPs outline the erosion control practices to be employed at the landfill. The practices should reduce the

amount of sediment and other pollutants in storm water discharges associated with the land disturbance activities. Sedimentation basins, sediment traps, silt fences, straw bales, and erosion control mats are examples of the methods landfills use to control sediment runoff. The inspector will check to see if the facility is required to have an SWPPP and the appropriate measures are being taken to control erosion and intercept sediment movement. If the inspector finds the facility does not have an SWPPP, or that adequate erosion control practices to prevent the discharge of sediment are not being utilized, report the condition to the regional office water pollution staff for follow-up. The inspector shall also notify the SWMP Engineering Section of the problems at the facility.

Vector Control and Aesthetics

- Vectors - Vectors are pests capable of transmitting disease-causing organisms. Examples of vectors are flies, rodents, and birds. Landfills are required to maintain conditions that are unfavorable for harboring, feeding, and breeding of vectors. The best way to control vectors is through daily litter collection and the proper application of cover. In addition, any depressions that may collect and hold water should be filled in to eliminate breeding grounds for mosquitoes.

- Dust - Missouri Air Pollution Control regulations require that any dust generated at a sanitary landfill must not be visible beyond the facility boundaries. On-site dust problems may lead to restricted visibility, increasing the chance for vehicle or equipment accidents. Spraying water on the surface of the landfill's haul road will control dust. Seeding and mulching inactive areas, installing final cover and establishing vegetation as soon as possible after final elevations are reached reduces dust blowing from the filled areas.

- Litter - Inadequate control of litter may result in increased numbers of insects, rodents, birds and other scavengers at the landfill, and complaints from the public. Litter fences should be used at the working face and around the site to prevent litter from blowing off-site. In addition, the working face should be compacted and covered as soon as possible. The Solid Waste Management Law and regulations require that litter be collected and containerized or disposed of at the working face by the end of each operating day. The inspector will check to see if litter is being adequately controlled at the working face and is being collected daily.

- Odors - Decomposition of the wastes disposed in landfills generates unpleasant odors. Landfills can minimize the odors by maintaining adequate daily, intermediate, and final cover and through the proper operation of landfill gas collection and disposal systems.

Safety

The landfill shall be designed, constructed and operated in a manner so as to protect the health and safety of personnel and others associated with and affected by the operation. A fire extinguisher shall be provided on all solid waste handling equipment. Any fires in wastes being delivered to the landfill or that occur at the working face or within equipment or personnel facilities shall be extinguished. Adequate communications equipment shall be available at the landfill for emergency situations. Scavenging shall be prohibited at all times to avoid injury. Access to the landfill shall be controlled and

shall be established by roadways only. The landfill shall be accessible only when operating personnel are on duty. Dust-control provisions shall be utilized as necessary for safety purposes and to prevent a nuisance to surrounding areas.

Records
Records are to be maintained at the landfill office for five years past its current date of operation. The landfill is required to keep records of any major operational problems it has had and complaints that it receives. It must keep records of gas monitoring and of the actions it has taken to control vectors, dust and odors. Landfills should also keep leachate pumping and disposal records. The facility must keep records on the type, source, and volume of special wastes it receives and the disposal location of asbestos-containing materials. The landfill is required to keep records of the volume of waste it has received and the tonnage fees paid to the department. The facility must also record and report annually on the volume of waste it receives from out of state.

3.5.3 Inactive/Closed Permitted Facilities

Landfills
The Regional Offices and the SWMP are responsible for ensuring that landfill owners and operators properly close and maintain their landfills after they have closed. The requirements for closure of Subtitle D landfills are found in Standard Requirements for all Landfills (10 CSR 80-2.030(4)), Specific Requirements for Sanitary Landfills (10 CSR 80-3.010), Specific Requirements for Demolition Landfills (10 CSR 80-4.010), and Specific Requirements for Utility Waste Landfills (10 CSR 80-11.010). Regional office inspectors shall note the date of the last receipt of waste and verify that the closure/post closure plan is being implemented as approved. Items the inspector may need to evaluate during the inspection of inactive and closed facilities include:

- soil cover depths and types
- grades and slopes
- erosion
- vegetation types and density
- installation and maintenance of groundwater monitoring equipment, leachate collection systems; and gas-monitoring/control systems
- leachate outbreaks
- status of submittals of closure documents to the SWMP

The following closure documentation must be submitted and approved by the SWMP before a sanitary landfill may receive official closure approval:

- closure/post-closure care plan
- a survey plat
- as-built drawing(s)
- an easement, notice and covenant
- an engineering certification

The following closure documentation must be submitted and approved by the SWMP before a demolition landfill may receive official closure approval:

- closure plan
- 30-year post-closure care plan (for facilities permitted after July 30, 1997)
- a survey plat
- as-built drawing(s)
- an easement, notice and covenant
- an engineering certification

Descriptions of the above-referenced documents are provided below:

- Closure/Post-Closure Care Plans - To guide a landfill during closure and post-closure activities, landfills must have an approved closure/post-closure plan that outlines the methods and schedule by which the facility will be closed, monitored and maintained after the facility stops accepting waste. Both the regional office and the SWMP should have a copy of the approved closure/post-closure plan on file. When the operating procedures or design of the facility changes through a permit modification, the closure/post-closure plan must be updated to reflect changes to the facility.

  The regulations require a landfill to begin implementing the closure activities within 30 days after the phase or permitted area receives the final volume of waste. Therefore, it is important that the inspector makes a record of the date the facility received its final load of waste. The regulations also require that the facility establish vegetation within 180 days of beginning the closure activities. This is not strictly enforced because it generally takes longer than that to get a good stand of vegetation established.

- Survey Plat - The survey plats for sanitary, demolition, and utility waste landfills must be prepared by, and bear the stamp of, a land surveyor registered in Missouri and must be submitted to the SWMP for approval (10 CSR 80-3.010(20)(C)2. or 10 CSR 80-4.010(20)(C)2.). After approval, the original plat must be recorded with the County Recorder of Deeds. Two copies of the notarized and properly recorded plat, showing the Recorder of Deed's seal or stamp, the book and page numbers, and the date of filing, must be submitted to the department within 30 days of the date of filing. The following information must be included on the survey plat:

  - the name and permit number of the landfill
  - the name of the property owner as it appears on the deed
  - a detailed legal description of the permitted boundary and the waste placement area (footprint where the waste is located)
  - the location, type, and depth of waste within the landfill
  - the length of time the landfill is to continue post-closure maintenance
  - the location of any environmental control systems at the landfill.

- As-built Drawing - The primary purpose of the as-built drawing is to show the final contours and all environmental control systems at the landfill. The as-built drawing must bear the stamp of the professional

engineer who submitted the drawing. The survey plat and the as-built drawing may be combined in one drawing. If the survey plat and as-built drawing are combined into one drawing, then the drawing must bear the stamp of the professional engineer and the stamp of the registered land surveyor. This document must also be approved by the SWMP and recorded with the county recorder of deeds' office. Two copies of the filed documents must be returned to the SWMP within 30 days of the filing.

- Easement, Notice and Covenant (ENC) - The purpose of the easement is to allow department access to the landfill following closure. To satisfy this requirement, the form entitled Agreement for Easement, Notice and Covenant Running with Land (SWMP standard form, 05-14-03) must be used. This document must be prepared, signed, the signature notarized, and submitted to the SWMP for approval. After approval, the original ENC must be recorded with the County Recorder of Deeds' Office. Two copies of the notarized and properly recorded ENC, showing the Recorder of Deed's seal or stamp, the book and page number, and the date of filing, must be submitted to the department. The following information must be included on the ENC:
    - a statement that says the property has been permitted as a sanitary, demolition, or utility waste landfill; and
    - a statement that says that use of the land in any manner that interferes with closure plans, and when applicable, post-closure plans filed with the department, is prohibited.

- Engineering Certification - An engineering certification is a letter or statement from a professional engineer, registered in Missouri, certifying that the landfill has been closed in accordance with the approved closure plan.

After all the above-referenced documents have been approved, the final step in securing official closure and starting the post-closure period for a landfill is the "final closure inspection". The regional office inspector and SWMP personnel conduct this inspection. The owner/operator must submit a request for the final closure inspection in writing to the SWMP when they believe the landfill is ready to be inspected.

The purpose of the final closure inspection is to verify that the closure plan has been implemented as approved, that site conditions comply with regulatory requirements, and that environmental problems have not developed at the site. The inspector shall document the findings of the final closure inspection on the inactive landfill inspection checklist. The regional office inspector will be responsible for completing the inspection checklist and for mailing the inspection report to the facility. The SWMP engineering section will draft and send out either a letter to the landfill that lists the problems with the site that prevent it from being closed or a letter granting official closure. Once a landfill is officially closed by the SWMP, the Closed Landfill Inspection Checklist should be used to document any subsequent inspections of the facility.

Generally, sanitary landfills that ceased accepting waste before June 30, 1973 are regarded as closed, since they had virtually no closure/post-closure requirements. For those that ceased accepting waste after June 30, 1973, but prior to August 13, 1986, the closure requirements varied by landfill, but required the filing of a detailed survey and/or plat, and other minimal physical site requirements that were program-approved. Sanitary landfills

that ceased accepting waste after August 13, 1986, and before June 19, 1992, have closure and post-closure requirements imposed by Senate Bill 475. These include financial assurance requirements and a 20-year post-closure care period. Sanitary landfills that ceased accepting waste after June 19, 1992 have a 30-year post-closure period as well as specific closure and post closure requirements.

Sanitary landfills that accepted waste for disposal after April 8, 1994, fall under "Subtitle D" requirements, which include groundwater monitoring, gas monitoring, leachate collection systems, corrective action criteria and a 30-year post-closure care period (unless corrective actions extend that period of care). The department director may shorten or lengthen the post-closure care period of a landfill based on site-specific conditions and the need to protect public health and the environment.

All files and engineering plans concerning closed solid waste disposal areas shall be maintained by the regional office. The SWMP also maintains a copy of the engineering plans and other important documents in permanent storage. Questions regarding closure/post-closure should always be directed to the SWMP engineering section or to the enforcement section if the case was referred to obtain official closure.

- Vegetation – A good stand of vegetation must be maintained on the top and side slopes of the landfill. Vegetation is necessary to prevent erosion of the soil cap, which may cause exposure of the waste, allow air intrusion into the buried waste, or jeopardize the stability of the slope. The vegetation must be mowed regularly to prevent the encroachment of woody species. Regrading, reseeding, and fertilization may also be needed to establish vegetation over bare spots and after erosion repairs are made.

- Erosion – The landfill cap, particularly the sloped areas, are to be checked for signs of erosion. As mentioned above, erosion of the cap can result in a number of problems. Exposure of waste can result in vector and odor problems. It can also allow air intrusion into the buried waste, which may cause a subsurface landfill fire. Erosion also weakens slopes and increases the potential for slope failure. The inspector will point out any areas of significant erosion and direct the owner to make the necessary repairs to prevent future problems.

- Subsidence or settling – Subsidence or settling is one of the results of waste decomposition. This is normally seen as small shallow depressions along the landfill surface that may collect water. The depressions allow for greater infiltration or percolation of storm water through the cap into the waste below and lead to an increase in the production of leachate and gas. Therefore, any areas of subsidence should be filled in, graded to shed water, and vegetated.

  Rapidly formed larger and deeper depressions may indicate a subsurface fire. Smoke may or may not be seen coming up through the cap in or around the depression. Any areas where there is sudden and significant settling should be evaluated for the possibility of a fire.

- Gas – Decomposition of the waste in sanitary and demolition landfills will result in the generation of decomposition gases. The migration of these gases off landfill property may cause significant threats to

human health or the environment. Migration of methane gas through the soil may cause stress or death of vegetation (especially trees). Landfill gas may also migrate and accumulate in confined spaces, causing explosions or asphyxiation.

To protect public health and the environment from the potential effects of landfill gas, the facility is required to monitor for landfill gas at the property line. The inspector will check to see what monitoring requirements (if any) apply to the inactive or closed landfill they are inspecting. They will ensure the facility is performing the required monitoring and is reporting the results to the department as required.

Some inactive and closed landfills have installed active or passive gas collection and control systems. The inspector shall check to see if the operator is operating the system in accordance with the operations manual for the equipment. For more information about landfill gas collection and control systems, refer to the section on Active landfills.

- Leachate – Leachate from solid waste disposal areas has the potential for causing pollution to the waters of the state, if allowed to get into surface or subsurface water. The inspector should look for any signs of leachate outbreaks, particularly on the side slopes and at the toe of the filled areas. If leachate is leaving the property or entering a waterway, it will be documented as an unsatisfactory feature and an NOV issued to the facility. A sample of the leachate will be collected. The inspector will report unpermitted discharges or outfalls to the regional office water pollution staff for appropriate follow-up.

- Land Use – The end use of a permitted solid waste disposal area must be specified in the facility's construction permit or closure plan. Certain uses are discouraged or prohibited by the program because of their potential for damaging the cap or creating conditions that may be harmful to public health or the environment. The inspector will check to see if the use of the facility is in accordance with the facility's permit, approved plans, or approved request for modification of the facility. Any unauthorized use of the landfill property found during an inspection shall be brought to the attention of the SWMP Engineering Section for follow-up.

3.5.4 Processing Facilities

The statutory definition of a Solid waste processing facility is any facility where solid wastes are salvaged and processed, including:
(a) A transfer station; or
(b) An incinerator that operates with or without energy recovery but excluding scrap tire end-user facilities; or
(c) A material-recovery facility that operates with or without composting.

Transfer stations process and consolidate solid wastes for ultimate disposal. This is considered processing of solid waste. There are currently no solid waste incinerators in Missouri. A material-recovery facility is an establishment where recovered materials have been diverted or removed from the solid waste stream for sale, use, reuse or recycling, whether or not they require subsequent separation and processing. Recovered materials are

exempted from the statutory definition of solid waste.

The design and operation of solid waste processing facilities may vary significantly, depending on the volume and type of wastes processed and the type of processing performed at each facility. Therefore, before inspecting any processing facility, it is important for the inspector to review the facility's operating permit, the approved as-built design plans and the facility's approved operations manual. The processing facilities will be evaluated on at least the following items:

- waste handling and processing procedures
- location and condition of storage areas
- general housekeeping practices
- record keeping practices

If waste tracking documents are a required part of the records (as in infectious waste processing facilities), the inspector will examine the tracking documents in detail. The inspector may randomly sample documents in lieu of a detailed examination of all documents for compliance with the laws and regulations.

Solid Waste Transfer Stations

- Excluded Wastes - The unloading and loading of solid wastes at transfer stations should be supervised at all times to screen for unacceptable wastes. Methods used for screening the wastes vary from facility to facility. The inspector will review the screening procedures used by the transfer station to ensure that they match with those in the facility's approved operations manual. The inspector shall also observe the procedures to see whether they are adequate to detect and prevent the transfer of excluded wastes.

- Housekeeping, Vectors and Aesthetics - The Solid Waste Management Law and regulations require that transfer stations be operated in an aesthetically acceptable manner and maintained in a condition that is unfavorable for the harboring, feeding and breeding of vectors. The facility is also required to implement a routine housekeeping schedule that regularly presents a neat and clean appearance. The loading and unloading areas should be cleaned as spills occur and, unless otherwise approved by the department, the facility must containerize all putrescible waste at the end of the each working day. The facility must not store putrescible wastes on-site for longer than 24 hours. The facility is also required to collect litter at least daily and is required to take immediate action to eliminate any odors, dust, or excess noise that may create a nuisance. The regulations require that a routine housekeeping schedule be established and maintained at the transfer station. The inspector will review the facility's housekeeping practices to see if they comply with the regulations and any schedules established in their approved operation's manual.

- Surface Water Quality Protection - To prevent pollution of the waters of the state, any wastewater generated at the transfer station, including washdown water, must be collected and transported to a permitted wastewater treatment facility. Transfer stations are also required to obtain an NPDES permit if they discharge storm water off

the property during precipitation events. The regulations require that all waste transfer and processing must take place under a roof to prevent precipitation from coming into contact with the waste. The inspector shall determine if the facility is performing the waste handling activities under a roof, properly managing the wastewater generated at the facility, and has obtained a storm water permit (if required).

- Safety - The landfill shall be designed, constructed and operated in a manner so as to protect the health and safety of personnel and others associated with and affected by the operation. A fire extinguisher shall be provided on all solid waste handling equipment. Any fires in wastes being delivered to the landfill or that occur at the working face or within equipment or personnel facilities shall be extinguished. Adequate communications equipment shall be available at the landfill for emergency situations. Scavenging shall be prohibited at all times to avoid injury. Access to the landfill shall be controlled and shall be established by roadways only. The landfill shall be accessible only when operating personnel are on duty. Dust control provisions shall be utilized as necessary for safety purposes and to prevent a nuisance to surrounding areas.

- Records - The inspector will check to see that the facility is keeping all records required for proper operation of the transfer station. At a minimum, transfer stations are required to maintain records on the quantity of wastes received and shipped each day, the amount of waste shipped out of state, and the amount of tonnage fees submitted to the department each quarter. Actions taken to address odor, vector, dust or litter problems, and major operational problems must also be recorded. Other records may be required as specified in the facility's approved permit and operations manual. The inspector will check to see if the facility is keeping the required records and submitting the quarterly tonnage fee reports.

3.5.5 Infectious Waste Processing Facilities

Infectious wastes are those that may contain pathogens of sufficient virulence and quantity so that exposure to the waste by a person could result in an infectious disease. Consequently, proper handling, processing and treatment of the infectious wastes is essential for the protection of public health and the health of the facility's employees.

Treatment Options
Incinerators – Specific design and operational requirements for incinerators that treat infectious wastes are established in the solid waste management regulations, the air conservation commission regulations, the facility's operating permit, and the facility's operations manual. The inspector will review the operation of the incinerator to determine if it is being operated in compliance with these requirements. The requirements include, but are not limited to, maintaining minimum temperatures and retention times in the combustion chambers, staying within approved waste feed rates, performing visual inspections of the ash, etc. The inspector will also check to see that the incinerator operator has received the appropriate training for operation of the facility.

Steam sterilization – Sterilization facilities are required to test the effectiveness of their treatment unit at least once per week. The inspector will review the test records to ensure that the facility is performing the required tests. In addition, the inspector will review the operational records to ensure that adequate records on the operation of the facility are being maintained. The inspector shall check to see if the minimum temperatures and retention times are maintained in accordance with the manufacturer's recommendations. The inspector will also check to see that the facility operator has received adequate training.

Chemical Treatment – Facilities desiring to chemically treat the infectious waste they accept must receive prior approval from the department on a case-by-case basis. The inspector will review any special design or operations requirements and the terms of approval for the treatment method before conducting the inspection. Based upon the site-specific methods, the inspector will determine whether the facility is operating per the terms of the treatment method approval, the facility permit, and the approved facility operations manual.

Disposal of Treated Wastes
Infectious waste that has been treated and rendered innocuous may be disposed as a solid waste if the treatment facility provides certification that the required treatment has been performed. The inspector will review the certification documents to ensure that all information required by regulation has been included (see 10 CSR 80-7.010(3)(A) and (B)).

Incinerator residues (ash) from infectious waste incinerators must be tested every six months for hazardous waste characteristics. If the ash has been sampled and determined not to be a hazardous waste, it may be managed and disposed of as a special waste.

Sharps treated by steam sterilization or chemical process must be packaged in leak-resistant and puncture-resistant containers prior to disposal at a landfill.

Records
The regulations require that each shipment of infectious waste be accompanied by tracking documents. The law also requires that specific information identifying the generator of the waste, transporter of the waste and their Missouri Transporter identification number, the quantity of waste, and the date of treatment be recorded on the tracking document. While at the facility the inspector will review any incoming shipments to determine the compliance status of accompanying tracking documents. The inspector will also review a sampling of the completed tracking documents on file at the facility to ensure that all required information is being recorded.

3.5.6 Processing Facilities and Transfer Stations - Miscellaneous

Occasionally an owner or operator will temporarily cease operations at a processing facility or transfer station. This may be while the facility is being closed for repairs, for an indeterminate period of time, or a permanent closure of the facility. Closing for repairs or remodeling does not place a processing facility in inactive status. If the inspector finds that a processing facility has shut down for a period of time, contact the SWMP Engineering Section to determine the status of the facility. Also discuss the situation with the SWMP Enforcement Section in an effort to determine if

regular inspections of the facility should continue. If a transfer station is permanently closed, inspections of the facility will no longer be required.

3.5.7 Scrap Tire Inspections

Scrap tires are regulated under §§260.270 - 260.279, RSMo, 10 CSR 80-8, and 10 CSR 80-9.030 and 9.035. The permitted facilities that will be inspected include scrap tire sites/processors and scrap tire haulers. Inspections of grant recipients will also be required in the work plans. Scrap Tire End Users are registered rather than permitted and will also be inspected. Unpermitted scrap tire sites will be investigated, usually on a complaint basis. Site clean ups will require inspections prior to, during and at the end of clean up activity to ensure specifications in the contracts or memorandum of understanding are adhered to by the clean up contractor.

Common Requirements of all Facilities
Regulated scrap tire entities are required to maintain records, adhere to storage requirements, fire protection standards, storm water management and vector control. The regulations and checklists depict these requirements as follows:

- Record Keeping:
  a) Tracking: The forms are different for each entity but essentially it is a record of where the tires are in the system of recycling and disposal. The forms depict where the tires were generated and who took them from one place to another for processing or disposal.
  b) Vector Control: Records are to be maintained documenting the method and schedule of vector control used.
  c) Records must be maintained for at least three years and must be made available to inspectors upon request.

- Fire protection requirements:
  a) Facility must have a letter from the local fire department stating the facility complies with their requirements.
  Or
  b) Tires must be at least 25’ from existing structures and public access to tires restricted, with weeds, grass and other combustibles controlled with the area of the tires. Tires must be accessible to fire fighting equipment.

- Vector Control:
  a) Scrap tires stored indoors or other dry area, or
  b) Scrap tires drained of water and covered or enclosed, or
  c) Scrap tires altered and do not contain water, or
  d) Larvicide/adulticide applied correctly to scrap tires

- Miscellaneous:
  a) Tires not stored in a wetland or floodplain
  b) Tires on site do not contain water
  c) Storm Water Issues: Surface water drainage diverted around and away from scrap tire site
  d) Number of tires on site

Permitted Scrap Tire Sites/Processor Inspections
A site is defined as a facility at which more than 500 tires are accumulated, but does not include an end user that either uses scrap tires as a fuel or

fuel supplement or converts scrap tires to a useable product. Since no sites can be permitted after August 28, 1997 unless they are also located at a permitted processing facility, all permitted sites are also permitted processors. However, since some processors do not accumulate more than 500 tires, they may not be considered a site. One can be a processor without being a site, but a facility can't be a permitted site without also being a permitted processor. Both types of processor facilities require inspections.

As part of the permitting process a site/processor must create a plan to address fire prevention and suppression, maximum storage capacity, closure activities and financial assurance measures, storm water and vector control, etc. This plan becomes part of their permit and they must adhere to both the terms and conditions of their permit and the regulations.

Items to look for in the inspection include, but are not limited to distance and storage requirements, compliance with fire protection regulations, vector and storm water controls, and record keeping requirements. See section 3.5.8, Forms and Checklists for the checklist to be used at a facility. If a processor is not also a site, they should always have fewer than 500 scrap tires on site.

Any discrepancies in the records and estimates of the number of tires on a site may suggest possible violations. Additional investigation may be needed. Tracking forms of haulers using the site should be cross-referenced against the list of permitted tire haulers.

Permitted Tire Hauler Inspections: Section 260.270.1.(5) states "It shall be unlawful for any person to transport scrap tires for consideration within the state without a permit."

Scrap Tire Haulers are required to keep records, and haul the scrap tires to a permitted or permit-exempt facility. The hauler is required to keep tracking records of where he picked up tires and where they were taken. These records shall be inspected closely and used to ensure proper disposal of the tires. Additional hauler inspections will be made as necessary, especially if there are operational problems (e.g. discrepancies in records, vector, fire or storage problems). Records will be inspected at the hauler's office or at the record retention location for the hauler. Appointments should be made to arrange a time and place where the hauler records may be reviewed.

Hauler tracking forms are to be cross-referenced and verified for legitimacy and accuracy. If a hauler is disposing of tires at unapproved or unpermitted locations, an NOV will be issued and an Enforcement Action Request submitted See section 3.5.8, Forms and Checklists, for a copy of the checklist to be used at a facility.

Scrap Tire Collection Center Inspections

A scrap tire collection center is defined as a site where scrap tires are collected prior to being offered for recycling or processing, and where fewer than 500 tires are kept on-site on any given day. Collection centers quite often are retailers, which are not required to have a permit. However, Section 260.270.1.(4)RSMo., states that "All tire retailers or other businesses that generate scrap tires shall use a scrap tire hauler permitted by the department, except that businesses that generate or accept scrap tires in the normal course of business may haul such scrap tires without a permit, if such hauling is performed without any consideration and such business

maintains records on the scrap tires hauled as required by sections 260.270 to 260.276." Retailers shall not be liable for illegal disposal of scrap tires after such scrap tires are delivered to a scrap tire hauler, scrap tire collection center, scrap tire site, scrap tire processing facility or scrap tire end-user facility if such entity is permitted by the department of natural resources.

Collection centers are required by the rules to adhere to record keeping, storage, vector control and fire protection requirements. The inspector will check to see that the facility complies with storage, vector and record keeping requirements.

Collection center tracking forms shall be closely scrutinized. The hauler(s) used, permit number, expiration date, and the number of tires accepted or removed by haulers will be cross-referenced and verified for legitimacy and accuracy. Any discrepancies in the records are to be investigated.

Registered Scrap Tire End-User Inspections
Scrap tire processors and end users are inspected pursuant to each Regional Office's annual work plan. The SWMP scrap tire unit will maintain a database of registered end users. The regional offices will advise the SWMP of any unregistered end users in their regions.

Section 260.270 1.(3)RSMo., "A person shall not maintain a scrap tire end-user facility unless the facility is registered by the department." End User facilities must adhere to record keeping, fire and storm water control requirements. There is no official checklist for these facilities. A short report or memorandum will be written to detail the findings of the inspection.

Tire Cleanup Inspections (Verification of Completion)
Regional office staff will be asked to perform inspections of scrap tire sites that were cleaned up using scrap tire funds. Upon notification that the cleanup is complete, the SWMP requests the appropriate regional office conduct an inspection of the site to verify that all tires have been removed. The inspector will perform a thorough walk of the property to see if any tires were missed or left on the property. Photographs shall be taken. If the tires were shredded, the inspector shall also determine if the property is free from tire chip residue.

Scrap Tire Grant Recipient Inspections
Regional office staff are also asked to perform inspections of Scrap Tire Grant Recipient Sites to verify that the recipient has completed the project in accordance with the project specifications. When the SWMP scrap tire unit grant coordinator receives notification from the recipient that the tire grant project has been completed, a request will be sent to the appropriate regional office to conduct an inspection. A photograph of the completed project shall also be appended to the inspection report form.

3.5.8 Forms and Checklists

- Active Landfill Inspection Checklist
- Processing Facility Inspection Checklist
- Inactive Landfill Inspection Checklist
- Closed Landfill Inspection Checklist
- Agreement for Easement, Notice and Covenant Running with Land
- Scrap Tire Processing Facility Inspection Checklist
- Scrap Tire Collection Center Inspection Checklist [MO 780-1715 (1-02)]
- Scrap Tire Hauler Inspection Checklist [MO 780-1719 (1-03)]

- Letter of Warning - Used when facility is found to be out of compliance in more than one area but violations do not warrant a Notice of Violation. This letter should accompany the checklist when sent to facility.

- Compliance Letter - Used when facility is found to be in compliance and should accompany the checklist when sent to facility.

- Overall Compliance Letter - Used when one minor unsatisfactory feature is found during the inspection. This letter should accompany the checklist when sent to facility.

- Notice of Violation and Cover letter - Used when significant violations are found during the inspection or high priority violations are found during an Initial Assistance Visit. Notice of Violation and cover letter should accompany the checklist when sent to facility.

Additional internal forms and checklists may also be available to department staff on the department's Intranet site, through the Solid Waste Inspection and Enforcement Manual.

Revision published: 7/07/06
Primary Authors: Rick Pretz, Beth Marsala